South African Horseflies of the tribe Pangoniini (Diptera: Tabanidae)

by

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The classification of Mackerras (1954: 435) divides the subfamily Pangoniinae into three tribes: Pangoniini, Scioniini and Philolichini. In a survey of the Tabanidae of the Ethiopian Region (Oldroyd, 1957: 34) I concluded that all the known Pangoniinae of this Region belonged to the tribe Philolichini, with the exception of two specimens of uncertain generic position. One of these, a female horsefly with hairy eyes, had been taken in the Cape Province, and was discussed and figured, but not given a name (*loc. cit.*: 453).

Mr and Mrs B. R. Stuckenberg have recently sent to me a male and a female of another hairy-eyed species, which they found sheltering in rock crevices in the Western Cape Province. Though specifically distinct from the earlier specimen, they are clearly closely related, and dissection of the male shows the genital styles to be clearly bifid, in the manner that Mackerras considers to be characteristic of the tribe Pangoniini.

In discussing the earlier specimen I commented on its resemblance to the Australian *Ectenopsis* Macquart, subgenus *Parasilvius* Ferguson, and this comparison is strengthened by the evidence of the two new specimens. They share with *Parasilvius* the hairy eyes, more densely so in the male, the antennal structure, and the shape of the eighth sternite of the female; whereas the closed first posterior cell of the wing, the trace of a linear frontal callus, and the longer proboscis of the new species are more like the Neotropical genus *Esenbeckia* Rondani (Mackerras, 1955: 480, fig. 20).

I have previously speculated (Oldroyd, 1957: 52), whether primitive groups of Tabanidae might not have originated in South America, and spread into Africa as well as Australia by a southern route. From Mackerras' account as well as my own observation, it seems that *Esenbeckia* is a complex of closely allied, primitive species, perhaps an active centre of evolution. Mackerras has emphasized the link between Neotropical *Esenbeckia* and Australian *Austroplex* Mackerras and *Ectenopsis* (including *Parasilvius*). It seems logical to consider the two African species under discussion as belonging to a new genus, standing in much the same relationship to *Esenbeckia* as do the two Australian genera mentioned above.

This is not a simple example of 'Gondwanaland' distribution, because Mackerras particularly states that *Esenbeckia* does not occur in Argentina and Chile. It is rather a further small piece of evidence in support of my earlier supposition that the origins of the tabanid fauna of the other continents may lie in tropical South America.

I have pleasure in naming this new genus in honour of Mr and Mrs Stuckenberg, who are very skilful at finding Diptera of special interest.

Genus *STUCKENBERGINA* gen. nov.

A genus of the tribe Pangoniini, distinguished from *Ectenopsis, Esenbeckia* and *Parasilvius* by the combination of hairy eyes in both sexes, with the closed and stalked first posterior cell of the wing. Body-shape like one of the Diachlorini (e.g. *Perisilvius* Enderlein), ashy-grey or brown, with longitudinal stripes on the thorax and pale segmentations on the abdomen, but no other striking pattern.

FEMALE: Eyes obviously hairy, hairs long and distinct, though not very dense. Frons rather narrow, as in fig. 1 b and f. Ocellar tubercle well-developed, rest of frons covered with tomentum, except for a narrow, ill-defined linear callus. Subcallus and face moderately prominent, both covered with tomentum, without any shining areas. First two antennal segments short, and moderately broad: flagellum of antenna broad basally, tapering to a long point, composed of eight segments, though basal ones may be incompletely separated. Palpi long and slender, reaching to level of tip of antennae, or beyond; labium in one species only as long as palpi, but more than twice as long in the other species. Labella small, but distinct, not heavily sclerotized. Thorax, abdomen and legs without any special characters of generic significance. Wings with a strong appendix to vein R_4, and with the first posterior cell (cell R_5) closed, and stalked.

MALE: Closely similar. Frons still narrower, but not holoptic, eyes separated by a distance equal to breadth of median ocellus. Hairs of eyes about equal in length to those of female, but finer and denser. Proboscis and palpi similar in the two sexes (at least in one species).

Type species: *Stuckenbergina africana,* described below.

Stuckenbergina africana spec. nov., fig. 1 e-k

An ashy-grey species, rather like one of the Diachlorini, but distinguished by the long proboscis, and, of course, the spurs of the hind tibiae. From the following species it is spearated by the much longer proboscis, narrower and clearer wings, and the general grey-and-black colouring.

FEMALE: Head as in fig. 1e and f. Eyes smoothly rounded, hairs about as long as second antennal segment, white, conspicuous, uniformly distributed, but not very dense. Frons narrowest at vertex, where it is about 1½ times

as broad as ocellar tubercle; thence broadening gradually to mouth margin. Ocellar tubercle tomentose, brownish, with three well-developed ocelli and long black hairs, which extend into a postvertical tuft. Traces of a narrow, linear, shining black median callus: otherwise frons, subcallus and face all uniformly covered with ashy-grey tomentum, and with fine, silky whitish hairs. Antennae as in fig. 1e, velvety-black. Proboscis long and slender, just twice as long as height of one eye, ashy-blackish, with many erect, short black hairs; labella rather small, soft, a little brownish in colour, not sclerotized. Palpi nearly half as long as labium, awl-like, with only an indistinct bare area towards tip; ashy-blackish in colour, with fairly long, black hairs.

Thorax: Mesonotum entirely covered with tomentum, brownish-grey, with ashy-grey pattern: broadly grey at sides, leaving a small black spot near each wing-base; grey sublateral stripes, united by a square prescutellar area; a

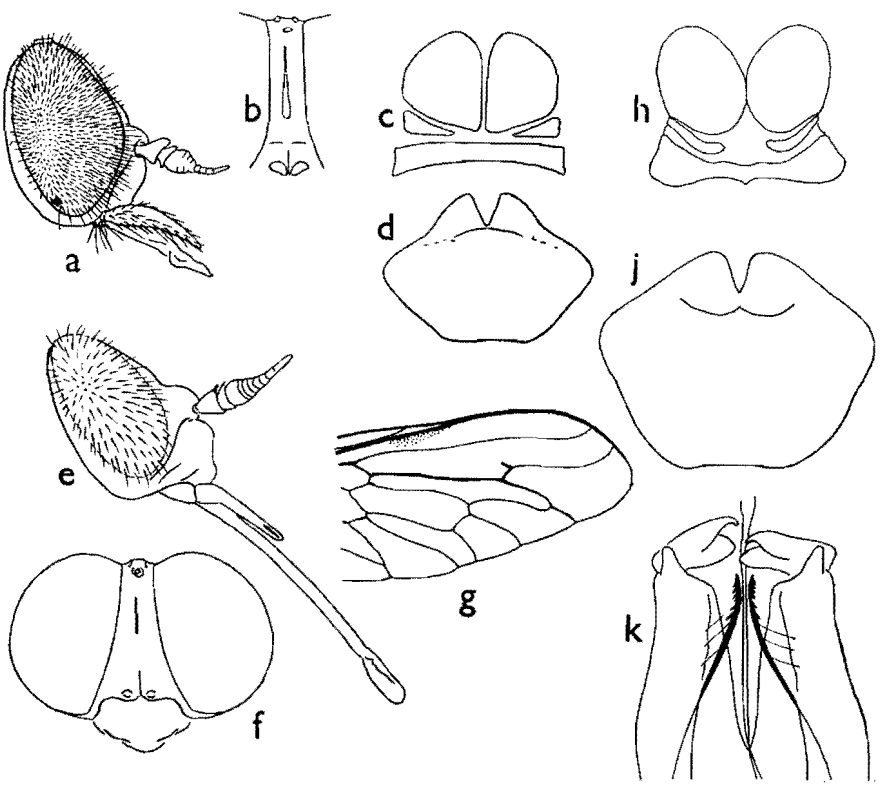

Fig. 1.**a-d.** *Stuckenbergina callani* spec. nov.: **a,** head in side view; **b,** frons; **c** and **d,** ♀-terminalia; **e-k,** *Stuckenbergina africana* spec. nov.: **e,** ♀ head in side view; **f,** ♀ frons; **g,** ♀ wing; **h** and **j,** ♀ terminalia; **k,** ♂ terminalia.

grey median stripe which is divided longitudinally by a narrow brown line; long, fine, black hairs, with glistening short, silky, yellow hairs beneath them. Scutellum brown in middle, ashy-grey at sides, with long black hairs. Pleura uniformly grey, with silky white hairs. Abdomen dorsally ashy-black with a bluish bloom when seen from certain angles; hind margin of each segment narrowly brown, with short, silky yellowish hairs; laterally hairs are longer and white, but over most of each segment they are shorter and black. No triangles nor any other pattern. Venter similar, but with broader pale segmentations, and predominantly pale hairs. Legs ashy-grey, with hairs mostly white, but some black. Extreme tips of femora orange, as are tibiae and tarsi, though these have darker tips and are obscured by short black hairs. Middle and hind tibiae each with two long red spurs, black at tip. Wings colourless except for a pale yellow stigma and very faint suffusions on crossveins. Fork of R_{4+5} with a well-defined appendix; cell R_5 (first posterior cell) closed some distance from wing-margin, resulting in a stalk about half as long as vein R_5. Halteres with orange stalk and brownish knob.

Female terminalia as in figs. 1h and j. Cerci oval, ninth tergite entire, a transverse bar of varying breadth. Eighth sternite as illustrated, with gonapophyses rather close together.

MALE: Eyes separated by a narrow strip about equal to anterior ocellus. Hairs of eyes brownish, softer and denser than those of female; long hairs of mesonotum denser and more conspicuous. In all other respects very similar to female in colour and pattern.

Male terminalia as in fig. 1k. Styles very clearly bifid, indicating tribal placing in Pangoniini. Aedeagus with six well-developed, backwardly-projecting teeth on each side, and two projecting flagella.

Length of body (excluding proboscis) 11 mm, of wing 10 mm.

♀ - HOLO- and one ♂ - PARATYPE: Bainskloof (Wellington Distr., C.P.), at about 2,000 ft., 4-5.X.1959 (B. R. & P. Stuckenberg); deposited in the British Museum (Nat. Hist.), London.

In correspondence Mr Stuckenburg tells me: "This species has unusual habits for a tabanid. Our two specimens were found resting in little shady crevices in large sandstone boulders lying on a heath-covered slope, high up in the Bainskloof mountains, and when disturbed they shot off at a great speed to an adjoining rock, where they sought out another shady nook in which to rest. There was no attempt to bite, and indeed no interest in us as potential prey shown at all."

Stuckenbergina callani spec. nov., fig. 1a-d

> Genus et species incertae I, Oldroyd, 1957, Horseflies of the Ethiopian Region 3: 453.

This fly is distinguished from the foregoing by its reddish-brown colour, its shorter and broader shape (Dr Callan, who sent it to me, remarked upon

its 'small head'), and its shorter labium, but in all essentials it agrees with *africana*.

FEMALE: Head relatively small, distinctly narrower than thorax. Frons much as in fig. 1f, but the vertex is flatter, not so much excavated between the eyes. Hairs of eyes, as in female *africana*, are uniform, and conspicuous, but rather widely spaced. Ground colour of frons, subcallus and face brown, with light brown tomentum. Ocellar tubercle standing on a shining brown area, which extends forwards as a narrow, linear brown callus. Hairs of frons and face black. First two segments of antenna brown with black hairs; first segment broad, and rather hooked dorsally; flagellum bright orange, with eight segments, but 1/2 and 3/4 are incompletely divided. Palpi elongate, as in *africana*, though rather less slender, and with a larger bare area; light brown in colour, with short black hairs. Labium very much shorter, light brown, with relatively long labella; as only one specimen is known, we cannot yet tell whether this labium may be capable of elongation (cf. Oldroyd, 1957: 55, pl. III).

Thorax: Mesonotum mahogany-brown, with light brown pattern as in *africana*, with fine black hairs, but with few silky yellow ones; pleura mahogany-brown with greyish-brown tomentum and many black hairs, yellowish ones on pro- and metapleura. Abdomen shining mahogany-brown with little or no tomentum and no distinct pattern; black hairs both dorsally and ventrally. Legs yellow-brown, with black hairs on fore and middle femora, yellow-brown posteriorly on hind femora, and many short orange hairs elsewhere. Wings distinctly short and broad, greyish, with brownish suffusions along costa and all main veins. As in *africana*, there is an appendix to vein R_4, and first posterior cell is closed, but in this species with a very short stalk. Halteres yellow-brown, with yellow knob.

Female terminalia as shown in figs. 1c and d (from Oldroyd, 1957: 454).

Length of body 10 mm, of wing 11 mm.

♀ HOLOTYPE: Groot Rivier, 12 mls. east of Plettenberg Bay (C.P.), 1.X.1955 (A. M. D. Martin); sent to me by Dr E. McC. Callan; deposited in the British Museum (Nat. Hist.), London.

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